

WHAT IS CLAIMED IS:

1. A mobile station for managing context-related information, wherein the mobile station comprises:
 - a context engine capable of storing context-related information based upon at least a portion of at least one condition, wherein the context engine is also capable of managing an exchange of the context-related information with at least one context consumer; and
 - a communication manager capable of communicating with at least one context consumer for the exchange of context-related information, at least one context consumer being located external to the mobile station.
2. A mobile station according to Claim 1, wherein the context engine comprises:
 - a blackboard capable of storing the context-related information; and
 - a subscription manager capable of providing at least one subscription to at least a portion of the context-related information to at least one context consumer.
3. A mobile station according to Claim 2, wherein the context-related information is capable of being at least one of retrieved from and stored by the blackboard.
4. A mobile station according to Claim 1, wherein the context-related information is stored as at least one context atom that comprises at least a name and an associated value.
5. A mobile station according to Claim 4, wherein the at least one context atom further comprises at least one of a timestamp, a source identifier, a reliability of the respective value, and an accuracy of the respective value.

6. A mobile station according to Claim 5, wherein at least a portion of the context-related information is based upon at least one of a timestamp, a source identifier, a reliability of the respective value, and an accuracy of the respective value.

5 7. A mobile station according to Claim 1 further comprising:
a subscription manager capable of permitting at least one context consumer to subscribe to at least one event regarding at least a portion of the context-related information.

10 8. A mobile station according to Claim 1, wherein the context engine is capable storing context-related information from at least one context producer, and wherein the at least one context producer comprises at least one of an application internal to the mobile station, an application external to the mobile station and a user of the mobile station.

15 9. A mobile station according to Claim 1 further comprising:
at least one sensor capable of measuring at least a portion of at least one condition of at least one of the mobile station and a user of the mobile station.

20 10. A mobile station according to Claim 9, wherein the at least one sensor is further capable of processing the portion of the at least one condition into context-related information.

25 11. A mobile station according to Claim 1 further comprising:
a privacy engine capable of providing at least a portion of at least one of security and privacy to the exchange of the context-related information.

30 12. A mobile station according to Claim 11, wherein the privacy engine is capable of operating in accordance with at least one rule to one of grant and deny permission to exchange context-related information with at least one context consumer.

13. A mobile station according to Claim 1, wherein the communication manager is capable of managing connectivity with at least one context producer for the exchange of context-related information, and wherein the communication manager is further capable of abstracting at least one communication technology such that the context engine is capable of operating independent of the at least one communication technology.

14. A mobile station according to Claim 1, wherein the context engine is capable of transmitting at least a portion of the context-related information to at least one context consumer external to the mobile station such that the at least one context consumer is capable of determining a context of the mobile station based upon the transmitted portion of the context-related information.

15. A mobile station according to Claim 1, wherein the context engine is capable of communicating with at least one external device according to a context exchange protocol that defines a format in which the context-related information is at least one of transmitted and received.

16. A mobile station according to Claim 1 further comprising:
a script engine capable of executing at least a portion of at least one context rule relating to at least a portion of the context-related information, wherein the at least one context rule is capable of comprising at least a portion of at least one condition, and wherein the script engine is capable of executing at least one context rule when the respective portion of the at least one condition is satisfied.

17. A mobile station according to Claim 16, wherein the at least one context rule is also capable of including at least one action to be performed when the respective portion of the at least one condition is satisfied.

18. A mobile station according to Claim 17, wherein a context consumer comprises an application for monitoring a health of a user of the mobile station, wherein

at least one context rule relates to the health of the user, and wherein the respective at least one context rule comprises at least a portion of at least one condition relating to the health of the user, and an alert to be issued when the respective portion of the at least one condition is satisfied.

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19. A mobile station according to Claim 1 further comprising:
at least one application program interface capable of facilitating at least one of the transmission and reception of context-related information.

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20. A communications system comprising:
at least one context producer capable of creating context-related information;
at least one context consumer capable of determining a context based upon the context-related information; and
a mobile station capable of storing context-related information created by the at least one context producer, wherein the mobile station is also capable of managing an exchange of the context-related information between the at least one context producer and the at least one context consumer.

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21. A communications system according to Claim 20, wherein the mobile station comprises a context engine capable of storing the context-related information, and providing at least one subscription to at least a portion of the context-related information to the at least one context consumer.

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22. A communications system according to Claim 21, wherein the context-related information is capable of being at least one of retrieved from and stored by the context engine.

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23. A communications system according to Claim 20, wherein the mobile station is capable of storing context-related information as at least one context atom that comprises at least a name and an associated value.

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24. A communications system according to Claim 23, wherein the mobile station is capable of storing context-related information as at least one context atom that further comprises at least one of a timestamp, a source identifier, a reliability of the respective value, and an accuracy of the respective value.

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25. A communications system according to Claim 24, wherein at least a portion of the context-related information is based upon at least one of a timestamp, a source identifier, a reliability of the respective value, and an accuracy of the respective value.

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26. A communications system according to Claim 20, wherein the mobile station comprises a subscription manager capable of permitting at least one context consumer to subscribe to at least one event regarding at least a portion of the context-related information.

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27. A communications system according to Claim 20, wherein the at least one context producer comprises at least one of an application internal to the mobile station, an application external to the mobile station and a user of the mobile station.

20. 28. A communications system according to Claim 20, wherein the at least one context producer comprises at least one sensor capable of measuring at least a portion of at least one condition of at least one of the mobile station and a user of the mobile station.

25 29. A communications system according to Claim 28, wherein the at least one sensor is further capable of processing the portion of the at least one condition into context-related information.

30 30. A communications system according to Claim 20, wherein the mobile station comprises a privacy engine capable of providing at least a portion of at least one of security and privacy to the exchange of the context-related information.

31. A communications system according to Claim 30, wherein the privacy engine is capable of operating in accordance with at least one rule to one of grant and deny permission to exchange context-related information with the at least one context consumer.

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32. A communications system according to Claim 20, wherein the mobile station comprises a communication manager capable of managing connectivity with the at least one context producer for the exchange of context-related information, and wherein the communication manager is further capable of abstracting at least one communication technology such that the mobile station is capable of operating independent of the at least one communication technology.

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33. A communications system according to Claim 20, wherein the mobile station is capable of transmitting at least a portion of the context-related information to the at least one context consumer external to the mobile station such that the at least one context consumer is capable of determining a context of the mobile station based upon the transmitted portion of the context-related information.

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34. A communications system according to Claim 20, wherein the mobile station is capable of communicating with at least one external device according to a context exchange protocol that defines a format in which the context-related information is at least one of transmitted and received.

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35. A communications system according to Claim 18, wherein the mobile station comprises a script engine capable of executing at least a portion of at least one context rule relating to at least a portion of the context-related information, wherein the at least one context rule is capable of comprising at least a portion of at least one condition, and wherein the script engine is capable of executing at least one context rule when the respective portion of the at least one condition is satisfied.

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36. A communications system according to Claim 35, wherein the at least one context rule is also capable of including at least one action to be performed when the respective portion of the at least one condition is satisfied.

5 37. A communications system according to Claim 36, wherein a context consumer comprises an application for monitoring a health of a user of the mobile station, wherein at least one context rule relates to the health of the user, and wherein the respective at least one context rule comprises at least a portion of at least one condition relating to the health of the user, and an alert to be issued when the respective portion of
10 the at least one condition is satisfied.

38. A communications system according to Claim 20, wherein the mobile station comprises at least one application program interface capable of facilitating at least one of the transmission and reception of context-related information.

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39. A communications system according to Claim 20 further comprising:
at least one electronic device capable of communicating with the mobile station,
wherein the at least one electronic device comprises a context engine capable of storing at
least a portion of the context-related information stored by the mobile station.

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40. A method of managing context-related information with a mobile station,
wherein the method comprises:

measuring at least a portion of at least one condition;
storing context-related information based upon the portion of the at least one
25 condition; and

managing an exchange of the context-related information with at least one context consumer, wherein managing the exchange comprises:

receiving a request for at least a portion of the context-related information
from a context consumer;
30 determining whether to grant permission for the context consumer to
receive the requested portion of the context-related information; and

transmitting the requested portion of the context-related information when permission is granted.

41. A method according to Claim 40, wherein managing an exchange of the
5 context-related information further comprises:

providing at least one subscription to at least a portion of the context-related information to the at least one context consumer.

42. A method according to Claim 40, wherein storing context-related
10 information comprises storing context-related information as at least one context atom that comprises at least a name and an associated value.

43. A method according to Claim 42, wherein storing context-related
information comprises storing context-related information as at least one context atom
15 that further comprises at least one of a timestamp, a source identifier, a reliability of the respective value, and an accuracy of the respective value.

44. A method according to Claim 43, wherein at least a portion of the context-
related information is based upon at least one of a timestamp, a source identifier, a
20 reliability of the respective value, and an accuracy of the respective value.

45. A method according to Claim 40, wherein measuring at least a portion of
at least one condition comprises measuring at least a portion of at least one condition by
at least one context producer comprising at least one of an application internal to the
25 mobile station, an application external to the mobile station and a user of the mobile station.

46. A method according to Claim 40, wherein measuring at least a portion of
at least one condition further comprises processing the portion of the at least one
30 condition into context-related information.

47. A method according to Claim 40, wherein determining whether to grant permission comprises determining whether to grant permission in accordance with at least one rule.

5 48. A method according to Claim 40, wherein transmitting the requested portion of the context-related information comprises transmitting the requested portion of the context-related information to at least one context consumer external to the mobile station such that the at least one context consumer is capable of determining a context of the mobile station based upon the transmitted portion of the context-related information.

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49. A method according to Claim 40, wherein managing an exchange of the context-related information further comprises:

executing at least one context rule relating to at least a portion of the context-related information, wherein the at least one context rule is capable of comprising at least a portion of at least one condition, and wherein executing at least one context rule comprises executing at least one context rule when the respective portion of the at least one condition is satisfied.

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50. A method according to Claim 49, wherein the at least one context rule is also capable of including at least one action to be performed when the respective portion of the at least one condition is satisfied.

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51. A method according to Claim 50, wherein a context consumer comprises an application for monitoring a health of a user of the mobile station, wherein at least one context rule relates to the health of the user, and wherein the respective at least one context rule comprises at least a portion of at least one condition relating to the health of the user, and an alert to be issued when the respective portion of the at least one condition is satisfied.

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52. A computer program product for managing context-related information, the computer program product comprising at least one computer-readable storage

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medium having computer-readable program code portions stored therein, the computer-readable program code portions comprising:

a first executable portion for receiving a measurement of at least a portion of at least one condition;

5 a second executable portion for storing context-related information based upon the portion of the at least one condition; and

a third executable portion for managing an exchange of the context-related information with at least one context consumer, wherein the third executable portion is adapted to receive a request for at least a portion of the context-related information from a context consumer, determine whether to grant permission for the context consumer to receive the requested portion of the context-related information, and when permission is granted, transmit the requested portion of the context-related information.

53. A computer program product according to Claim 52, wherein the third
15 executable portion is further adapted to provide at least one subscription to at least a portion of the context-related information to the at least one context consumer.

54. A computer program product according to Claim 52, wherein the second
20 executable portion is adapted to store context-related information as at least one context atom that comprises at least a name and an associated value.

55. A computer program product according to Claim 54, wherein the second
25 executable portion is adapted to store context-related information as at least one context atom that further comprises at least one of a timestamp, a source identifier, a reliability of the respective value, and an accuracy of the respective value.

56. A computer program product according to Claim 55, wherein at least a
30 portion of the context-related information is based upon at least one of a timestamp, a source identifier, a reliability of the respective value, and an accuracy of the respective value.

57. A computer program product according to Claim 52, wherein the first executable portion is further adapted to process the portion of the at least one condition into context-related information.

5 58. A computer program product according to Claim 52, wherein the third executable portion is adapted to determine whether to grant permission in accordance with at least one rule.

10 59. A computer program product according to Claim 52, wherein the third executable portion is adapted to transmit the requested portion of the context-related information to at least one context consumer external to the mobile station such that the at least one context consumer is capable of determining a context of the mobile station based upon the transmitted portion of the context-related information.

15 60. A computer program product according to Claim 52, wherein the third executable portion is further adapted to execute at least one context rule relating to at least a portion of the context-related information, wherein the at least one context rule is capable of including at least a portion of at least one condition, and wherein the third executable portion is adapted to execute at least one context rule when the respective
20 portion of the at least one condition is satisfied.

61. A computer program product according to Claim 60, wherein the at least one context rule is also capable of including at least one action to be performed when the respective portion of the at least one condition is satisfied.

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62. A computer program product according to Claim 61, wherein a context consumer comprises an application for monitoring a health of a user of the mobile station, wherein at least one context rule relates to the health of the user, and wherein the respective at least one context rule comprises at least a portion of at least one condition
30 relating to the health of the user, and an alert to be issued when the respective portion of the at least one condition is satisfied.